

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Takashi SUZUKI

Application No.: New US Patent Application

Filed: November 14, 2001

Docket No.: 110648

For: CRANKING-CAUSED VIBRATION SUPPRESSING APPARATUS AND METHOD FOR
INTERNAL COMBUSTION ENGINEINFORMATION DISCLOSURE STATEMENTDirector of the U.S. Patent and Trademark Office
Washington, D.C. 20231

Sir:

Pursuant to 37 CFR §1.56, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO-1449. Unless otherwise indicated herein, one copy of each reference is attached. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

- ☒ 1. This Information Disclosure Statement is being filed (a) within three months of the U.S. filing date of this non-CPA application, OR (b) before the mailing date of a first Office Action on the merits in the present application. No certification or fee is required.
- ☒ 2. Relevance of the non-English language reference JP A 10-212983 is discussed in the present specification.
- ☒ 3. A concise explanation of the relevance of the non-English language references appears in the Appendix attached hereto.
- ☒ 4. English-language Abstracts of the non-English language references are attached hereto.
- ☒ 5. US 5,722,359 corresponds to JP A 9-195812.

Respectfully submitted,

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APPENDIX

List of Related Art for IDS

US Patent	File Date	Issue Date	Comments
JP (A) 10-212983	29/01/1997	11/08/1998	An engine is cranked by a first electric motor MG1. At the instant when the engine starts combustion revolution, a drive torque of a second electric motor MG2 is applied in a direction opposite to the direction of the drive torque of the first electric motor MG1 so as to suppress vibrations caused by sharp changes in torque at the time of start of combustion revolution. This vibrations are suppressed after the cranking ends. That is, this invention are not concerned with vibrations occurring during the cranking.
JP (A) 09-195812	12/01/1996	29/07/1997	An engine controller for controlling a lean burn engine to operate in the lean range of its air/fuel ratio, and an electric generator/motor controller for controlling an electric generator/motor connected to the engine are provided. The electric generator/motor controller controls the electric generator/motor so that the torque variation of the engine caused by combustion pressure variation may be restricted when the combustion pressure variation quantity of the engine detected via a pressure sensor for the cylinder inner pressure of the engine or a variation quantity of the crank angular speed of the engine detected via a crank angle sensor exceeds each specified quantity.